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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,992	05/20/2004	Michael Twerdochlib	2004P06323US	8757

7590 09/06/2005

Siemens Corporation  
Intellectual Property Department  
170 Wood Avenue South  
Iselin, NJ 08830

EXAMINER
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EVANS, FANNIE L

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/849,992

Applicant(s)

TWERDOCHLIB, MICHAEL

Examiner

F. L. Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0504</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *The Information Disclosure Statement*

The prior art cited in the information disclosure statement filed on May 20, 2004 has been considered.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8-13, 15 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Zörner (US 5,445,027) in view of Katzir et al (US 6,864,498 B2).

Zörner discloses a system for imaging a rotating turbine blade comprising: a pulsed light source to illuminate the turbine blade to cause a movement-compensated image of the blade (lines 62-66 of column 2 and lines 50-56 of column 5); an image receptor (68) receiving the movement-compensated image; a sensor (67) generating information indicative of a velocity of the rotating turbine blade; and a processor generating a drive signal responsive to the information for controlling the frequency of the light pulses so that the movement-compensated image appears stationary relative to the image receptor (paragraph bridging columns 2 and 3 and lines 41-64 of column 5). Zörner does not the use of an image projector for receiving a moving image of the rotating blade and projecting a movement-compensated image of the blade.

Katzir et al disclose systems for imaging moving articles and teaches the use of means for freezing (movement compensating) an image of an article impinging on an image receptor (12) while the article and the receptor are generally continuously mutually moved relative to each other. Katzir et al

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disclose the alternative use of movable optical elements and pulsed light sources to freeze (movement compensate) the image of the article on the image receptor (lines 27-30 and 33-37 of column 4; lines 25-30 of column 6). Applicant's attention is directed to Katzir et al in its entirety.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to use a movable optical element (image projector) to receive a moving image of a turbine blade in Zörner and to project a movement-compensated image of the blade to the image receptor instead of using a pulsed light source. The movable optical element and the pulsed light source were functional equivalents, as evidenced by the disclosure of Katzir et al. The proposed system performs the method of claims 8-13, 15 and 16.

Claims 7 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Zörner (US 5,445,027) in view of Katzir et al (US 6,864,498 B2), as applied to claims 1-6, 8-13, 15 and 16 above, and further in view of Rosa (US 3,738,104).

The above proposed system has essentially every feature claimed by applicant except the magnetic reluctance sensor used to generate information indicate of the velocity of the turbine blade. Zörner uses a tachometer (67) to determine velocity.

In lines 60-68 of column 2, Rosa discloses the alternative use of a tachometer and a magnetic reluctance sensor to determine velocity.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to use a magnetic reluctance sensor instead of a tachometer to determine the velocity of the turbine blade of the proposed system because a magnetic reluctance sensor and a tachometer were functional equivalents, as evidenced by the disclosure of Rosa in column 2.


***Fax/Telephone Numbers***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner whose telephone number is (571) 272-2414.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**F. L. EVANS**  
**PRIMARY EXAMINER**  
**ART UNIT 2877**

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September 2, 2005